



# EFFECTS OF NESTING POSITIONS PROVIDE STABLE PHYSIOLOGICAL AND BEHAVIOURAL PARAMETERS, (SLEEP, COMFORT, ACTIVITY, FEEDING AND PAIN) - PRETERM BABIES

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## ABSTRACT

Preterm babies are the most vulnerable group who require advanced medical interventions and highly specialized nursing care in order to survive. Preterm infants are born with physiological handicaps. The sensory impact of the NICU has been predicate to influence the physiological, neuro-development outcome of preterm infants. So they are more prone to develop impaired sleep pattern, hypothermia, fluctuation of heart rate, hypoxia etc. Due to advances in perinatal and neonatal care, survival rates for preterm infants have increased. However, the risk for neurodevelopmental impairment remains high. Sleep is needed for the normal growth and development of an infant especially for the development of brain and it requires more than 18 hours sleep per day. Over 2 million children had some type of sleep disorder ((National Institute of Lung and Heart Disease, 2015). Newborn Individualized Development and Assessment Program was first initiated by Dr. Heidelise Als, psychologist from the Harvard University. Is the apt developmental care and assessment program for neonates as a totality of healthcare in order to improve the physical and mental condition of premature infants and their families? One of the interventions suggested in NIDCAP is referred to as "nesting". Nesting was designed by Danielle Salducci a pediatric physiotherapist. In nesting, the premature infant must be positioned in such way the head and body are on the same axis close to the midline, which is similar to the fetal position in mother's uterus. This paper reviews about meaning of Nesting, benefits and various types of nesting positions.

**Conclusion:** The benefits of nesting are it provides flexion position and utero feeling for the preterm and to make movements similar in mother's womb and promotes comfort, sleep and to maintain stable physiological and behavioral parameters.

## INTRODUCTION:

Preterm birth accounts for 75% of perinatal mortality and more than half the long-term morbidity. Pre-term babies are babies who born before 37 completed weeks of gestational age (WHO 2014). Following birth, the first few months act as a transitory period during which the baby adjusts from the aquatic to the aerial environment. These infants are anatomically and functionally immature leading to high neonatal morbidity and mortality. Due to advances in perinatal and neonatal care, survival rates for preterm infants have increased. However, the risk for of neurodevelopment impairments and respiratory and gastrointestinal complications.

Nesting is a supportive position technique which is used as a nursing care for the premature infant. It must be positioned in such way the head and body are on the same axis close to the midline, which is similar to the fetal position' as in mother's womb and promotes comfort, sleep and to maintain stable physiological parameters. It is made up with rolled towels, blankets or cot sheets in a 'U' shape to provide intrauterine boundaries and form a 'nest'.

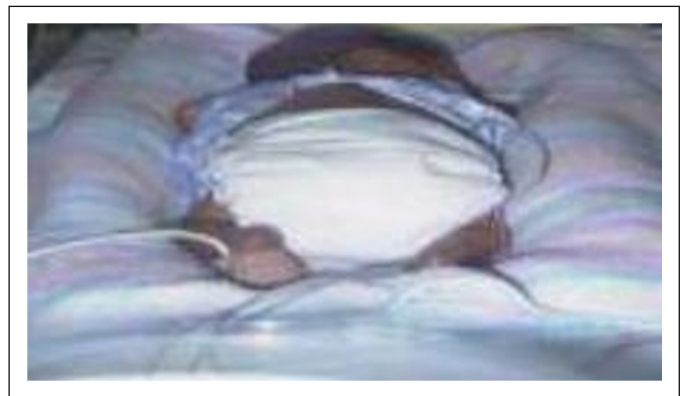
## Benefits of nesting:

- Promotes comfort, safe and enhances physiological stability.
- Resembles uterus and provides intrauterine feeling for the baby.
- Reduces the impact of gravity by keeping the infant's hands together near face and feet together i.e., all extremities at the midline, while maintaining the flexion posture and support optimal neuromotor development.
- Preserves energy and promote normal growth and development of infant
- Promotes CNS maturation.
- Helps in breathing movements by supporting the rib cage, reduces reflux, increases time spent in quiet sleep and saves energy and helps faster weight gain.
- Keeping their hands together to facilitate sleep and supports development of sensory systems.

## VARIOUS TYPES OF NESTING POSITION:

### Prone position:

The infant is positioned with head down by supporting a small pillow under the chest so that the legs are weight bearing through the anterior knee and lower legs and the hips are not flexed. The knees are out to the sides by gravity.



## Benefits:

- Helps in breathing movements by supporting the rib cage, reduces reflux, increases time spent in quiet sleep and saves energy and helps faster weight gain
- Improves circulation and digestion by enhances sleep and prevents cramping of internal organs.
- Maintains hips and knees in the mid position and therefore prevent excessive hip abduction
- Promotes proper joint alignment and symmetrical.
- It helps in ex-utero movement and muscle tone development which prevents postural deformities
- This position reduces the weight-bearing pressure on the bony structures in the face, which leads to lateral craniofacial flattening and palatal narrowing.

## Side lying:

The infant is positioned through side- lying (left or right) position by supporting the infant's back by the nest or small pillow.

**Benefits:**

- Provides support to the rib cage which facilitate respiration
- Keep the hands to their mouth for comfort when the infant is disturbed .
- The position is changed frequently on alternate sides to prevent plagiocephaly.
- This position is used once the babies are physiologically stable. Side lying encourages flexion and symmetry. The trunk should be supported perpendicular to the mattress

**Supine position:**

The infant is positioned in supine position through wrapping the infant by keeping the infant's hands together near face and feet together i.e., all extremities at the midline in nest through putting small pillow under the infant's shoulder to keep airway open.

**Benefits:**

- Allows observation of the face and trunk of fragile infants which prevent neck tightness and head flattening.
- Maintains the shoulders and hips in the mid position.
- Proper position of neonates reduces hip and shoulder abduction.

**Key points to be kept in mind:**

- Educate parents about nesting and observe their infant's behavior (comfort, sleep and pain).
- The routine care can be given by parents and health care person.
- Involve the parents in caring of the child.
- Create awareness about benefits of nesting interventions to the parents.

**CONCLUSION:**

Nurse should engage in preventive and promote services for enhancing health of the preterm babies to prevent physical handicaps. Nesting is a non pharmacological modalities and developmental care which can be used for preterm infant, for improving sleep, comfort enhances stable physiological functioning and neuromotor development of preterm infants admitted in NICU.

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